

## THE PLEIADS, OR THE FIRST COSMIC LYRE\*

Some ancient Greek sources dealing with the doctrine of cosmic harmony establish correspondences between heavenly bodies and the strings of the ancient Greek lyre. The heavenly bodies linked with cosmic music were, depending on the authors, the Earth, the Sun, the Moon, the five planets known in Antiquity, and the sphere of the fixed stars.<sup>1</sup> But, prior to these, it is highly probable that the first heavenly body to be linked with music by the Pythagoreans of the Classical period was the Pleiads, a group of seven stars mentioned in the Homeric poems and belonging to the constellation of Taurus.<sup>2</sup>

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<sup>1</sup> The most detailed accounts of the link between planetary spheres and the strings of the lyre are given by Alexander of Ephesus (fr. 21 *SupplHell*, quoted by Heraclit. *All.* 12, and by Theo Sm. p. 138 ff. Hiller) and by Nicomachus of Gerasa (*Harm.* 3, pp. 241–242 Jan). Concerning the first one, Theo of Smyrna says “Alexander the Aetolian”, whereas Heraclitus says “Alexander of Ephesus”. It seems that Heraclitus was right, and Theo of Smyrna was wrong, so we might be dealing with Alexander of Ephesus; cf. K. von Jan, “Die Harmonie der Sphären”, *Philologus* 52 (1894) 23 n. 43, with further references. There are other less explicit allusions to a connection between those heavenly bodies and the strings of an heptachord lyre: Varro of Atax, fr. 14 Morel (= 12 Traglia = 11 Büchner, quoted by Marius Victorinus, in *Grammatici Latini*, 6, 60 Keil = *Orph. fragm.* 419 Bernabé); Philo of Alexandria, *De opificio mundi*, 126; Nicom. *Theol. Arith.*, p. 71, 14–18 De Falco; Ps. Luc. *Astr.* 10 (*Orph. fragm.* 418 Bernabé); Serv. *Aen.* 6, 645; Serv. *Buc.* 8, 75; Macr. *Sat.* 1, 19, 15, and *scholion* to Verg. *Aen.* 6, 119 in the *Codex Parisinus Latinus* 7930 (*Orph. fragm.* 417 Bernabé).

<sup>2</sup> Cf. *Il.* 18, 486 (Πληϊάδας θ' ὕαδας τε τό τε σθένος Ὠρίωνος), and *Od.* 5, 272 (Πληϊάδας τ' ἐσορῶντι καὶ ὧψ' ἐδύοντα Βοώτην). The first author saying that they are seven is Euripides (*Phaethon* v. 171 Diggle, quoted by Ps.-Longin. *De sublimitate* 15, 4: ἵει δ' ἐφ' ἑπτὰ πλειάδων ἔχων δρόμον). For their myth, cf. Arat. 254–267; Ps. Eratosth. *Cat.* 1, 23; *sch. in Il.* 18, 486; D. S. 3, 60, 4–5 (= Dionys. Scyt. *FGrH* 32 F 7 = fr. 7 Rusten, esp. ll. 18–36); D. H. *Antiquitates romanae* 1, 61, 1, ll. 5–9; Germ. *Arat.* 255–269; *sch. in Germ. Arat.* v. 254; Hyg. *Fab.* 192; Hyg. *Astr.* 2, 21, 2–4; Hesych. s. v. (π 2550), and *EM* p. 675, ll. 35–54.

This connection of the Pleiads with music was attributed to the Pythagoreans by Porphyrius, who cited Aristotle as his source (and who was probably telling the truth at that point). And it continued to be mentioned, although with no further explicit mention of its Pythagorean origin, until the end of the literary history of Antiquity.

We shall begin with a passage of Porphyrius's *Life of Pythagoras*, where, citing Aristotle as his source, he wrote that the Pleiads were said by Pythagoras to be the lyre of the Muses. It seems that the planets had not yet been related to music in those early days: in the very same breath, Porphyrius also says that the planets were called “the dogs of Persephone” by Pythagoras:

ἔλεγε δέ τινα καὶ μυστικῶ τρόπῳ συμβολικῶς, ἃ δὴ ἐπὶ πλέον Ἀριστοτέλης ἀνέγραψεν. οἷον ὅτι τὴν θάλατταν μὲν ἐκάλει Κρόνου δάκρυον, τὰς δὲ ἄρκτους Ῥέας χεῖρας, τὴν δὲ πλειάδα Μουσῶν λύραν, τοὺς δὲ πλάνητας κύνας τῆς Περσεφόνης.<sup>3</sup>

He (sc. Pythagoras) said certain things as in the mysteries, in a figurative way. Aristotle, in fact, recorded most of them, as when he called the sea ‘a tear of Kronos’; the Bears ‘the hands of Rhea’; the Pleiads ‘the lyre of the Muses’; and the planets ‘the dogs of Persephone’.

This could actually be an ancient tradition, because, according to the cosmology attributed to the Pythagoreans by Aristotle, there were ten heavenly bodies;<sup>4</sup> later, Aetius ascribed such a system to Philolaos and Hicetas.<sup>5</sup> Therefore, the common association of the seven-stringed

<sup>3</sup> Cf. Porph. *VP* 41 (= Arist. fr. 196 Rose = 159 Gigon = *Pythagoristae* 58 C 2 DK).

<sup>4</sup> Namely: Sun, Moon, Earth, Mercury, Venus, Mars, Jupiter, Saturn, the fixed stars, and the so called Counter-Earth, an invention to make the number of heavenly bodies equal to ten, the most perfect number for the Pythagoreans: cf. Arist. *Cael.* 293 a 20–27 (= *Pythagoristae* 58 B 37 DK: ἐναντίως οἱ περὶ τὴν Ἰταλίαν, καλούμενοι δὲ Πυθαγόρειοι λέγουσιν: ἐπὶ μὲν γὰρ τοῦ μέσου πῦρ εἶναι φασί, τὴν δὲ γῆν, ἐν τῶν ἄστρον οὖσαν, κύκλῳ φερομένην περὶ τὸ μέσον νόκτα τε καὶ ἡμέραν ποιεῖν. ἔτι δ' ἐναντίαν ἄλλην ταύτη κατασκευάζουσι γῆν, ἣν ἀντίχθονα ὄνομα καλοῦσιν, οὐ πρὸς τὰ φαινόμενα τοὺς λόγους καὶ τὰς αἰτίας ζητοῦντες, ἀλλὰ πρὸς τινὰς λόγους καὶ δόξας αὐτῶν τὰ φαινόμενα προσέλκοντες καὶ πειρώμενοι συγκοσμεῖν); Arist. *Metaph.* 986 a 8–12 (= *Pythagoristae* 58 B 4 DK: λέγω δ' οἷον, ἐπειδὴ τέλειον ἢ δεκάς εἶναι δοκεῖ καὶ πᾶσαν περιειληφέναι τὴν τῶν ἀριθμῶν φύσιν, καὶ τὰ φερόμενα κατὰ τὸν οὐρανὸν δέκα μὲν εἶναι φασί, ὄντων δὲ ἐννέα μόνον τῶν φανερῶν διὰ τοῦτο δεκάτην τὴν ἀντίχθονα ποιοῦσιν).

<sup>5</sup> Cf. Aetius Placit. 2, 7, 7, pp. 336–337 Diels (*ap.* Stob. 1, 22, 1 d = Philol. 44 A 16 DK = A 16 b Huffman: Φιλόλαος πῦρ ἐν μέσῳ περὶ τὸ κέντρον, ὅπερ



lyre with the Sun, Moon, and the five planets observed in Antiquity was not possible among the earlier Pythagoreans.

On the other side, in a passage of his *Metaphysics*, Aristotle criticizes the Pythagorean notion that number reflects the essence of things. In this discussion, he lists groups of seven elements, and asks whether those things come into being because they are seven. Among the heptads he mentions we find the seven strings of a ἁρμονία, the vowels of ancient Greek language, and the Pleiads (instead of the Sun, the Moon, and the other five planets).<sup>6</sup> Since the same Aristotle, as we said above, described a Pythagorean cosmic system of ten heavenly bodies, it is likely that the Stagirite drew those examples from the Pythagoreans whose doctrines he was discussing. And, even if he did not explicitly attribute to the Pythagoreans any association among those groups of seven, his mention of the seven strings and the seven Pleiads may hint at the Pythagorean *symbolon* “The Pleiads are the lyre of the Muses”, quoted by Porphyrius, who in this case is reliable: when he mentioned Aristotle as his source, he was not simply trying to make respectable a late speculation. Given that Aristotle was not a sympathizer with Pythagoreanism, Porphyrius (who was such a sympathizer) would not cite him as a source if he were only trying to discredit the Pythagoreans

ἐστίαν τοῦ παντός καλεῖ καὶ Διὸς οἶκον καὶ μητέρα θεῶν, βωμόν τε καὶ συνοχὴν καὶ μέτρον φύσεως. καὶ πάλιν πῦρ ἕτερον ἀνωτάτω τὸ περιέχον. πρῶτον δ' εἶναι φύσει τὸ μέσον, περὶ δὲ τοῦτο δέκα σώματα θεῖα χορεύειν, οὐρανόν τ' τε πλανήτας, μεθ' οὓς ἥλιον, ὕψ' ᾧ σελήνην, ὕψ' ἣ τὴν γῆν, ὕψ' ἣ τὴν ἀντίχθονα, μεθ' ἧς σύμπαντα τὸ πῦρ ἐστίας περὶ τὰ κέντρα τάξιν ἐπέχον), and Aetius Placit. 3, 11, 3, p. 377 Diels, *ap. Ps.-Gal. Phil. Hist.* 83, *Eus. PE* 15, 57, 1–4 (= *Philol.* 44 A 17 DK = A 17 Huffman: Φιλόλαος ὁ Πυθαγόρειος τὸ μὲν πῦρ μέσον (τοῦτο γὰρ εἶναι τοῦ παντός ἐστίαν), δευτέραν δὲ τὴν ἀντίχθονα, τρίτην δὲ τὴν οἰκουμένην γῆν ἐξ ἐναντίας κειμένην τε καὶ περιφερομένην τῇ ἀντίχθονι; cf. *Ps.-Plut. Plac. Phil.* 895 e 4–7, with no difference but τρίτην δ' ἦν οἰκοῦμεν γῆν, instead of τρίτην δὲ τὴν οἰκουμένην γῆν); Aetius Placit. p. 376 Diels (= Hicetas, fifth cent. BC, 50 A 2 DK: Θαλῆς καὶ οἱ ἄπ' αὐτοῦ μίαν εἶναι τὴν γῆν, Ἰκέτης ὁ Πυθαγόρειος δύο, ταύτην καὶ τὴν ἀντίχθονα, and cf. *Ps.-Plut. Plac. Phil.* 895 c 8: Ἰκέτης ὁ Πυθαγόρειος δύο, ταύτην καὶ τὴν ἀντίχθονα). The incompatibility of this cosmology with any planetary scale has been pointed out by W. Burkert, *Lore and Science in Ancient Pythagoreanism* (Cambridge, Mass. 1972) 351–352. It is rather curious that no source is known linking the alleged ten heavenly bodies with the ten elements of the *tetraktys*.

<sup>6</sup> Vid. Arist. *Metaph.* 1093 a 13–14 (= *Pythagoristae* 58 B 27 DK): ἐπτά μὲν φωνήεντα, ἐπτά δὲ χορδαὶ ἡ ἁρμονία, ἐπτά δὲ αἱ πλειάδες, ἐν ἐπτά δὲ ὀδόντας βάλλει (ἐνία γε, ἐνια δ' οὐ), ἐπτά δὲ οἱ ἐπὶ Θήβας. ἄρ' οὖν ὅτι τοιοῦτο ὁ ἀριθμὸς πέφυκεν, διὰ τοῦτο ἢ ἐκεῖνοι ἐγένοντο ἐπτά ἢ πλειὰς ἐπτά ἀστέρων ἐστίν;

in this case by mentioning random examples. From all this, we can conclude that Porphyrius was actually transmitting an ancient tradition, and that the aphorism “The Pleiads are the lyre of the Muses” could actually go back to the time of the author of the *Metaphysics*.<sup>7</sup>

Additional sources establish a link between the Pleiads and the seven-stringed lyre,<sup>8</sup> representing a continuation of the old Pythagorean tradition by the Alexandrine scholars and Latin poets (who do not mention the Pythagorean character of the association). These include an anonymous commentator on Aratus, who wrote: “It (i. e. the lyre) was first made by Hermes from the tortoise-shell, and it had seven strings because of the Atlantids”.<sup>9</sup> These Atlantids are the same as the Pleiads,

<sup>7</sup> On the antiquity of the Pythagorean aphorisms, C. Hölk, *De acusmatis sive symbolis Pythagoricis* (Kiel 1894) 31–33, whose strongest argument is the parallel between the commandment transmitted, alongside with other Pythagorean ἀκούσματα, by Iamblichus *VP* 18, 84 (γυναῖκα οὐ δεῖ διώκειν τὴν αὐτοῦ, ἰκέτις γὰρ διὸ καὶ ἀφ' ἐστίας ἀγόμεθα, καὶ ἡ λήψις διὰ δεξιᾶς), and Arist. *Oeconomica* 1344 a 8–13 (Πρῶτον μὲν οὖν [νόμοι πρὸς γυναῖκα] [καὶ] τὸ μὴ ἀδικεῖν οὕτως γὰρ ἂν οὐδ' αὐτὸς ἀδικοῖτο. Τοῦθ' ὑφηγεῖται δὲ [δ] καὶ ὁ κοινὸς νόμος· καθάπερ οἱ Πυθαγόρειοι λέγουσιν, ὥσπερ ἰκέτιν καὶ ἀφ' ἐστίας ἡγμένην ὡς ἥκιστα δεῖν [δοκεῖν] ἀδικεῖν· ἀδικία δὲ ἀνδρὸς αἰ θύραζε συνουσίαι γιγνόμεναι). Cf. also A. Delatte, *Études sur la littérature pythagoricienne* (Paris 1915) 259, 307, and 308 (arguing from the dialogic form, typical of early wisdom literature; cf. Burkert (n. 5) 188, and Chr. Riedweg, *Pythagoras* (München 2002) 103, who recall the case of the Seven Sages (cf. *Plut. Sept. Sap. Conv.* 153 c); Burkert (n. 5) 166–192: for instance, Anaximander of Miletus the Younger, to judge from *Xen. Symp.* 3, 6, worked about allegories and the *Suda*, s. v. (= α, 1987 = *FGrH* 9 T 1 = 58 C 6 DK), attributes him an interpretation of the Pythagorean symbols, so they may go back to pre-classical or archaic times); M. L. West, “Alcman and Pythagoras”, *CQ* 17 (1967) 11–14, esp. 12; M. L. West, *Ancient Greek Music* (Oxford 1992) 224, and Riedweg (supra in this same note) 61, 91, and 94.

<sup>8</sup> On the following see F. Molina Moreno, *Orfeo y la mitología de la música* (Madrid 2003) 431 ff.

<sup>9</sup> *Scholia in Aratum* v. 269 (*sch.* MDAKVUAS: αὕτη δὲ κατεσκευάσθη μὲν ὕψ' Ἑρμοῦ πρῶτον ἐκ τῆς χελώνης ἐπτάχορδος, ἀπὸ τοῦ ἀριθμοῦ τῶν Ἀτλαντίδων); cf. *Ps.-Eratosth. Cat.* 24 (Περὶ τῆς Λύρας. Αὕτη ἐνάτη κεῖται καὶ ἐστὶ Μουσῶν· κατεσκευάσθη δὲ τὸ μὲν πρῶτον ὑπὸ Ἑρμοῦ ἐκ τῆς χελώνης καὶ τῶν Ἀπόλλωνος βοῶν, ἔσχε δὲ χορδὰς ἐπτά ἢ ἀπὸ τῶν ζ' πλανητῶν ἢ ἀπὸ τῶν Ἀτλαντίδων); *Hyg. Astr.* 2, 7, 2: *Alii autem dicunt Mercurium, cum primum lyram fecisset in Cyllene monte Arcadiae, septem chordas instituisse ex Atlantidum numero, quod Maia una ex illarum numero esset, quae Mercurii est mater.* It is interesting that the seven planets are alluded to by *Ps.-Eratosthenes*, according to an analogy far more common among the ancient writers than the one with the Pleiads (cf. the sources quoted in n. 1); but the mention of the planets may be an interpolation (cf. W. Hübner, “Die Lyra cosmica des Eratosthenes: das neunte



who were called “offspring of Atlas” by Hesiod and many others.<sup>10</sup> This link between the Pleiads and the strings of the lyre survives in Ovid’s *Fasti* (“you are thought to have given seven strings, the Pleiads’ number, to the lyre”<sup>11</sup>), and in the *Aratea* by the fourth century C. E. Latin poet Avienus:

When the beautiful Apollo filled it in his turn with celestial harmony, he taught Orpheus to handle it inside the Pangaeon grotto. This one played wise tunes on nine strings according to the number of the Muses, being himself the son of a Muse; he who discovered it brought forth his songs from the number of the Pleiads.<sup>12</sup>

That is, the Pleiads would have provided the heavenly pattern for human lyres. In the context of Avienus’ passage, the discoverer of the lyre was Hermes, as in the charming *Homeric Hymn to Hermes*, and the reference to the Pleiads reminds us that Hermes was the son of Maia, one of the Pleiads.<sup>13</sup> So, in fashioning the lyre, Hermes decided on seven strings as a reflection of the Pleiads, just as Orpheus would do when he increased the number of strings to reflect the Muses. Thus, it seems as if both Muses and Pleiads provided a divine model for the lyre,

Sternbild der Musen mit neun Sternen und neun Saiten”, *Mus. Helv.* 55 [1998]: 2, 106 n. 113).

<sup>10</sup> Hes. *Op.* 383 (Πληιάδων Ἀτλαγενέων ἐπιτελλομένων), and Hes. fr. 169 Merkelbach, quoted in a *scholion* to Pind. *N. II*, 17 c (Τηϋγέτη τ’ ἐρόεσσα καὶ Ἥλεκτρη κυανῶπις / Ἀλκυόνη τε καὶ Ἀστερόπη δῖη τε Κελαινὴ / Μαῖα τε καὶ Μερόπη, τὰς γείνατο φαίδιμος Ἀτλας); cf., by the way, the Ps.-Eratosth. *Cat.* 23 (τρεῖς μὲν οὖν μιγῆναι Δίῃ, Ἥλεκτραν ἐξ ἧς Δάρδανος, Μαῖαν ἐξ ἧς Ἑρμῆς...).

<sup>11</sup> *Fasti* 5, 105–106: *septena putaris, / Pleiadum numerum, fila dedisse lyrae*. The subject of this sentence is Hermes. This idea survived among Renaissance music theorists: for example, the Ovidian verses are quoted by Johannes Tinctoris, *De inventione et usu musicae*, p. 41 Weinmann ([http://www.music.indiana.edu/tml/15th/TININY\\_TEXT.html](http://www.music.indiana.edu/tml/15th/TININY_TEXT.html), consulted on July 6, 2004).

<sup>12</sup> Avienus, *Aratea*, 621 ff.: *hanc ubi rursus / concentus superi complevit pulcher Apollo / Orphea Pangaeo docuit gestare sub antro. / hic iam fila novem docta in modulamina movit / Musarum ad speciem Musa satus, ille repertor / carmina Pleiadum numero deduxerat*.

<sup>13</sup> Cf. Hes. fr. 169 Merkelbach, quoted above, n. 10; Hellanicus, *FGrH* 4 F 19 a, *ap. sch. in Hom. II.* 18, 486 (φησὶ δὲ καὶ Ἑλλάνικος ἐν τῷ πρώτῳ τῶν Ἀτλαντικῶν τὰς μὲν ζ’ θεοῖς συνελθεῖν Ταυγέτην Δίῃ, ὣν γενέσθαι Λακεδαιμόνα· Μαῖαν Δίῃ, ἅφ’ ὧν Ἑρμῆς...); Arat. 261–263; Ps.-Eratosth. *Cat.* 23; Call. fr. 693 Pfeiffer, *ap. sch. in Thcr.*, 13, 25; D. S. 3, 60, 4 (= Dionys. Scyt. *FGrH* 32 F 7 = fr. 7 Rusten, II. 18–21); Germ. Arat. 262–263; Hyg. *Fab.* 192; *sch. vet. in Hes. Th.* 383 (= *sch. Procli in Hes. Th.* 381).

but, as we have seen, it is likely that the Pleiads made the first model according to the Pythagoreans. Among the beings related to the lyre, only the Pleiads belonged primarily to the heavenly world, whereas the Muses originally had no astral connections, nor did represent a set of seven elements.

Beyond their relationship to the lyre, the Pleiads were also occasionally related to music throughout antiquity. Sometimes the interpretation might be open, for example, when some authors view the Pleiads as forming a choir.<sup>14</sup> The first source mentioning the Pleiads as a choir might be Euripides’ *Phaethon*, if we accept Diggle’s proposal for filling a *lacuna* on the papyrus where the corresponding fragment has been preserved.<sup>15</sup> With Diggle’s supplement, Euripides’ lines read: “Above my head the choir of the Pleiads has fled”. It is not impossible that Euripides actually wrote that line, since the image of a choir of stars was already known in Greek poetry, and the same Euripides could have it in mind in another passage where he mentions the Pleiads and Hyads.<sup>16</sup> If so, Euripides would be the first author linking the Pleiads

<sup>14</sup> Philo of Alexandria, *De opificio mundi* 115 (ὁ τῶν πλειάδων χορός); Hyg. *Fab.* 192 (*Pleiades ... ex quibus Electren negant apparere propter Dardanum amissum Troiamque sibi ereptam; alii existimant Merope <n> conspicere erubescere quia mortalem virum acceperit, cum ceterae deos haberent; ob eamque rem de choro sororum expulsa maerens crinem solutum gerit, quae cometes appellatur*); Hor. *C.* 4, 14, 21 (*exercet Auster Pleiadum choro*); Prop. 3, 5, 36 (*Pleiadum spisso cur coit igne chorus*); Q. S. 13, 551–554 (ἧς εἵνεκά φασι καὶ αὐτὴν / Ἥλεκτρην βαθύπεπλον ἐὼν δέμας ἀμφικαλύψαι / ἀχλύϊ καὶ νεφέεσσιν ἀνηναμένην χορὸν ἄλλων / Πληϊάδων αἱ δὲ οἱ ἀδελφειαὶ γεγάσιν).

<sup>15</sup> That is, the papyrus where the main extant parts of Euripides’s *Phaethon* have been preserved (*Pap. Berol.* 9771), cf. J. Diggle (ed.), *Euripides. Phaethon* (Cambridge, 1970) 33–34, and F. Jouan and H. Van Looy, *Euripide. Tragédies. VIII, 3. Fragments. Sthénébée – Chrysippos* (Paris 2002) 244. Only the initial letters of the first word of v. 66 (πλεια) can be read on that papyrus. One of the editors of Euripides’s *Phaethon*, James Diggle, has proposed to fill the *lacuna* in this way: Πλειάδων πέφευγε χορός]. Cf. Diggle (*supra* on this same note) 99, who provides many parallel passages for supporting his supplement: the passages where the image of a choir of stars appears are quoted in our n. 16; for passages where the verb φεύγω is referred to the Pleiads or to other stars, cf. Hes. *Op.* 619–620; Eur. *Ion* 84; Ovid. *Met.* 2, 114; 10, 448–9; *Am.* 1, 13, 28, etc.

<sup>16</sup> Cf. S. *Ant.* 1146–7 (ἰὼ πῦρ πνεόντων / χοράγ’ ἄστρον); Critias, fr. B 19 DK (= fr. 4 Snell-Kannicht, *ap. Clem. Al. Strom.* V, 14, 114, 2, who attributes the fragment to Euripides; cf. the notes of B. Snell and R. Kannicht, *Tragicorum Graecorum Fragmenta* [Göttingen 1986] 170–173): σὲ τὸν αὐτοφυῆ, τὸν ἐν αἰθερίῳ / ῥύμβῳ πάντων φύσιν ἐμπλέξανθ’, / ὅν περὶ μὲν φῶς, περὶ δ’ ὀρφαῖα / νδὲ αἰολόχρως ἄκριτός τ’ ἄστρον / ὄχλος ἐνδελεχῶς ἀμφιχορεύει; Eur. *Ion* 1078–80 (ὅτε καὶ Διὸς ἀστερωπὸς / ἀνεχόρευσεν αἰθήρ, / χορεύει δὲ



with a musical reality, perhaps even before the Pythagorean association with the seven-stringed lyre. One may, however, argue that the musical connotations of the word χορός were not at work in the texts mentioning the choir of the Pleiads. Euripides' lines in *Phaethon*, mentioned above, contain no further reference to a musical activity of those stars, and the same thing can be told about the other passages: for example, Philo says "the choir of the Pleiads is made up of a hebdomad, and their risings and settings become causes of great goods for all",<sup>17</sup> in a passage where he is not dealing with music, but mentioning other groups of seven, like the Little Bear, which consists also of seven stars.<sup>18</sup> When Hyginus tells the myth of the Pleiads, he says that one of them was ashamed to have a mortal husband, whereas her sisters married gods, and because of this she was evicted from the "choir of her sisters", where *chorus* stays metaphorically for "group".<sup>19</sup> In those passages, χορός can mean simply "troop" or "ordered group", a signification it shows when referred to things like fishes, specifically told to be "voiceless" by Sophocles in a fragment where he says: "the choir of voiceless fishes shouted in answer".<sup>20</sup> Nevertheless, the reference to a musical activity is clearer when Hyginus said that the Pleiads lead the dance (*chorea*) of the stars.<sup>21</sup> This may well be coherent with the regulating role of the Pleiads: as we have already mentioned, their rising and setting indicated the proper time for

σελάνα), and Eur. *El.* 467–8 (ἄστρον τ' αἰθέριοι χοροί, / Πλειάδες Ὑάδες). Cf. Philol. A 16 b Huffman (above n. 5); Mesom. *Sol.* 17 (σοὶ μὲν χορὸς εὐδῖος ἀστέρων / κατ' Ὀλυμπον ἄνακτα χορεύει); Varro, fr. 269 Buecheler, *ap.* Nonnius, 451 M. (*repente noctis circiter meridie, / cum pictus aer fervidis late ignibus / caeli chorean astricen ostenderet*); Tibul. 2, 1, 88 (*matris lascivo sidera fulva choro*); Manil. 2, 118 (*signorumque choros ac mundi flammea tecta*); Statius *Achilleis* 2, 643–4 (*vidit chorus omnis ab alto / astrorum...*), etc. However, "choir" is not the only word for alluding to a group of stars: Seneca *Med.* 96, says *Pleiadum greges*, "the herds of the Pleiads".

<sup>17</sup> Cf. Philo of Alexandria, *De opificio mundi*, 115: ὁ τῶν πλειάδων χορὸς ἀστέρων ἑβδομάδι συμπληρῶται, ὃν αἱ ἐπιτολαὶ καὶ ἀποκρύψεις μεγάλων ἀγαθῶν αἵτιαί γίνονται πᾶσι.

<sup>18</sup> Cf. Philo of Alexandria, *De opificio mundi*, 114.

<sup>19</sup> Cf. Hyg. *Fab.* 192, quoted above (n. 14).

<sup>20</sup> S. Fr. 762 Radt, quoted by Athenaeus (second–third centuries C. E.), 7, 5 (fish: χορὸς δ' ἀναύδων ἰχθύων ἐπερρόθει); Ael. *NA* 5, 13 (bees: περὶ τοῦ τῶν μελιττῶν χοροῦ); Eur. *HF* 925 (children: χορὸς δὲ καλλιμόρφος εἰστήκει τέκνων); Xen. *Oec.* 8, 20 ("row of dishes": χορὸς γὰρ σκευῶν); Coluthus (an epic poet of the fifth–sixth centuries C. E.), v. 125, uses that word for the row of reeds forming a syrinx (καὶ χορὸν εὐκελάδων δονάκων ἐπὶ φηγὸν ἐρείσας). In Ar. *Ra.* 548, it means "row of teeth" (τοῦ χοροῦ τοὺς προσθίους); cf. Gal. *De usu partium* 3, 871 K. (ὁδόντων χορὸν οὕτω καλῶς διεκόσμησεν ἡ φύσις).

<sup>21</sup> Hyg. *Astr.* 2, 21, 3 (*Pliades existimentur choream ducere stellis*).

important human activities,<sup>22</sup> and the ancients were prone to express that notion of order in terms of musical harmony and rhythm. In any case, these characteristics (forming a choir or leading the dance of the stars) are very seldom applied to other constellations: only two stars of the Little Bear are called *choreutae* ("members of a choir") by Hyginus, and only Aries is said to lead the zodiac's dance in a poem attributed to Empedocles.<sup>23</sup> The Pleiads could be more often and consistently connected with the idea of choral dance because of their other associations with music.

Other sources are more explicit about the musical connections of the Pleiads. In the twilight of Antiquity, Nonnus of Panopolis explicitly attributes to the Pleiads sound phenomena in two passages where the Pythagorean passion for numerical coincidences can also be detected: "And the pole crashed, and, responding by itself to the seven-zoned heaven, the seven-mouthed echo of the Pleiads' shout cried from their throats, whose number matches that of the heavens".<sup>24</sup> The second passage reads: "The winding seven-star echo of the band of the Pleiads made the seven-zoned heaven roar with recurrent voice, and the stars, running contrariwise and quivering their sound from their throats, whose number matches that of the heavens, wandered like Bacchants".<sup>25</sup>

<sup>22</sup> On the relationship between the Pleiads, the calendar, and the seasons, cf. R. Böker, "Die Kalendarik der Pleiaden-Phasen", *RE* 42 (1952) 2502–2505, and "Pleiaden im Kalender", *ibid.*, 2505–2514. Among many other sources, vid. Arat. 264–267; *scholion* to Arat. (MDAVUA) 259; Georgios Choeroboscus (a grammarian of the sixth century C. E.), *De orthographia (epitome)*, p. 252, ll. 18–20 Cramer; Saint Isidorus of Sevilla, *Etym.* 3, 71, 13. – The relevance of the Pleiads for regulating human activities is attested by Hesiod, who says that the rising of the Pleiads indicates the time for harvest; their setting, the time for ploughing (Hes. *Op.* 383–384). On the other side, the setting of the Pleiads indicates the time in which navigation should be avoided, according to Hes. *Op.* 618–623; cf. Aratus 264–267.

<sup>23</sup> Other constellations related to choral activities: (a) Two stars of the Little Bear are called "choreutae", according to Hyg. *Astr.* 3, 1, 2 (*reliqui autem duo Choreutae dicuntur, quod circum polum versantur*); cf. Ioannes Camaterus, *Introductio in astronomiam*, lines 617 ff. (ἡ δ' Ἄρκτος ἡ μικροῦς ἄστέρας ἔχει τοῦδε: / ἐπὶ τὸν ἀριθμὸν εἰσι, τρεῖς ἐπὶ τοῦ πλινθίου / ὁ πρὸ ποδῶν αὐτὸς ἀστήρ, καλεῖται δὲ καὶ Πόλος, / οἱ δ' ἄλλοι δύο Χορευταί); (b) Great and Little Bears, in Nonn. *D.* 38, 407 (ἀλλήλων ἐχόρευον ἐπ' ἰζύι κυκλάδες Ἄρκτοι); (c) Aries, *ap.* Ps. Emp. *Sphaer.* 1, v. 83 (Πρῶτος χορείας Κριὸς ἡγεῖται κύκλου).

<sup>24</sup> Nonn. *D.* 1, 240–242 (καὶ πόλος ἐσμαράγησεν ἀμειβομένη δὲ καὶ αὐτὴ / οὐρανὸν ἐπτάζωνον ἰσηρίθμων ἀπὸ λαμῶν / Πληιάδων ἀλάλαξε βοῆς ἐπτάστομος ἡχώ). Cf. also Nonn. *D.* 13, 412–414 (Ἠλέκτρης ἀνέτελλε δι' αἰθέρος ἑβδομος ἀστήρ / δεξιὸν ὕσμίνης σημήιον, ἀμφὶ δὲ νίκη / Πληιάδων κελάδησε βοῆς ἀντίθροος ἡχώ).

<sup>25</sup> Vid. Nonn. *D.* 38, 380–383 (Πληιάδος δὲ φάλαγγος ἔλιξ ἐπτάστομος ἡχώ / οὐρανὸν ἐπτάζωνον ἐπέβρεμε κυκλάδι φωνῇ / καὶ κτύπον αἰθύσσοντες ἰσηρίθμων ἀπὸ λαμῶν / ἀστέρες ἀντιθέοντες ἐβακχεύθησαν ἀλῆται).



We may observe that the words employed by Nonnus for the sounds of the Pleiads coincide with those designating the sounds of the heavenly bodies (presumably referring to the Sun, Moon, and the five planets) in some passages dealing with the music of the spheres.<sup>26</sup> It is also noteworthy that the Pleiads were the only heavenly body in the sphere of the fixed stars to which sound phenomena are specifically attributed.

Another source, a Proclean *scholion* to Hesiod (probably not earlier than Nonnus) substitutes the individual Pleiads for the heavenly Muses in association with the planetary spheres:

Τούτου δὲ παίδας τὰς Πλειάδας ἐμυθολόγησαν ἑπτὰ οὔσας, τὴν Κελαινῶ, τὴν Στερόπην, τὴν Μερόπην, τὴν Ἥλέκτραν, τὴν Ἀλκυόνην, τὴν Μαΐαν, τὴν Ταυγέτην. Πάσας ταύτας δυνάμεις ἀρχαγγελικὰς τῶν ἑπτὰ σφαιρῶν τοῖς ἀρχαγγέλοις ἐφειστώσας· τὴν μὲν Κελαινῶ τῆς Κρονίας σφαίρας, τὴν δὲ Στερόπην τῆς τοῦ Διός, τὴν δὲ Μερόπην τῆς Ἄρεος, τὴν δὲ Ἥλέκτραν τῆς Ἡλιακῆς, τὴν δὲ Ἀλκυόνην τῆς Ἀφροδίτης, τὴν δὲ Μαΐαν τῆς Ἑρμοῦ, τὴν δὲ Ταυγέτην τῆς Σελήνης. Καὶ δῆλαι τούτων αἱ αἰτίαι. Μίαν δὲ ἄρα τῶν ἑπτὰ σύνταξιν ἐν τῷ ἀπλανεῖ τετάχθαι καθάπερ ἄγαλμα ἐνουράνιον, ὃ δὴ Πλειάδα προσαγορεύουσιν, ἄστρον ἐμφανὲς καὶ τοῖς ἰδιώταις, ἐν τῷ Ταύρῳ κατεστηριγμένον, ταῖς ἀνατολαῖς καὶ ταῖς δύσεσι παμπόλλην τοῦ ἀέρος τροπὴν ἐργαζόμενον.

His (i. e. Atlas's) daughters are said in the myths to be the Pleiads, who are seven (Kelaino, Sterope, Merope, Electra, Alcyone, Maia, Taygete), and that these all are archangelic powers presiding over the archangels of the seven spheres;

<sup>26</sup> Cf. ἡχώ, in Nonn. *D.* 1, 242; 13, 414 (quoted in n. 24), and 38, 380 (quoted in n. 24), with Theo Sm., p. 147 Hiller (ἔνιοι δὲ Σειρήνας οὐ τοὺς ἀστέρας λέγεσθαί φασιν, ἀλλὰ κατὰ τὸ Πυθαγορικὸν τοὺς ὑπὸ τῆς τούτων φορᾶς γινόμενους ἦχους), and Simpl. *In Cael.* p. 468, ll. 21–2 Heiberg (οἱ δὲ Πυθαγόρειοι ἐναρμόνιον ἦχον ἀπὸ τῆς τῶν οὐρανίων σωμάτων κινήσεως ἔλεγον ἀποτελεῖσθαι). – Cf. φωνή, in Nonnus, 38, 381 (quoted in n. 25), with Philo of Alexandria, *De vita Mosis*, 2, 239 (οἱ γὰρ ἀστέρες εἰς γενόμενοι χορὸς ἔσονται τι μέλος ἐπάξιον; ὃ δ' οὐρανὸς ὅλος εἰς φωνὴν ἀναλυθεὶς δυνήσεται τι τῶν σῶν ἀρετῶν διηγήσασθαι μέρος;), and Simpl. *In Cael.* p. 464, ll. 14–19 Heiberg (ἐν δὲ δεξιότησι καὶ βαρύτησιν εἰσιν οἱ τῶν ἐναρμονίων λόγοι, εἰκότως τούτους ἐν ταῖς ἀποστάσεσιν εὐρηκότες καὶ διὰ τὰς ἀποστάσεις ἐν τοῖς μεγέθεσιν ἀνάλογον ἔχουσι ταῖς ἀποστάσεσιν καὶ διὰ τὰ μεγέθη ἐν ταῖς ταχύτησι καὶ βραδύτησι τῆς αὐτῆς ἀναλογίας φυλαττομένης ἐναρμόνιον γίνεσθαί φασιν τὴν φωνὴν ἥτοι τὸν νότον φερομένων κύκλῳ τῶν ἀστέρων). *Phonē* is also used by Plato for his heavenly Sirens in the myth of Er, the first Greek account for the notion of cosmic music (Pl. *Rep.* 617 b: ἐπὶ δὲ τῶν κύκλων αὐτοῦ ἄνωθεν ἐφ' ἐκάστου βεβηκέναι Σειρήνα συμπεριφερομένην, φωνὴν μίαν ἰεῖσαν, ἕνα τόνον· ἐκ πασῶν δὲ ὀκτὼ οὐσῶν μίαν ἁρμονίαν συμφωνεῖν).

Kelaino of the sphere of Saturn; Sterope of that of Jupiter; Merope of that of Mars; Electra of that of the Sun; Alcyone of that of Venus; Maia of that of Mercury, and Taygete of that of the Moon. And the reasons for that are clear: there is one group of seven, settled in the sphere of the fixed stars as an image of what there is in heaven. This group is called Pleiads, and this is a heavenly body placed in the constellation of Taurus, which even the profane may watch, and which with its risings and settings causes a very important change of the air.<sup>27</sup>

As in Nonnus, we may observe here the numerical correspondence between the Pleiads and the heavenly spheres. Apart from the strange association of the Pleiads with archangels, this text provides us a possible clue for answering the question: why were the Pleiads chosen as the first heavenly model of the seven-stringed lyre? The scholiast tells that the seven Pleiads were a model of another heptad, the one constituted by the Sun, the Moon, Venus, Mercury, Mars, Jupiter, and Saturn. This endows the Pleiads with a function similar to that of the Ideas from which the Platonic Demiurge creates the sensible things.<sup>28</sup> Obviously, this association probably does not stem from the earliest Pythagorean doctrines, in which ten celestial regions were the norm. Furthermore, the concept of a Demiurge is Platonic rather than Pythagorean. It seems that the scholiast produced a conflation of Pythagorean and Platonic conceptions: the importance of the Pleiads and their correspondence with the planetary spheres rests on the Pythagorean interest in numerical coincidences; the Pleiads as a model for a celestial system seems to draw on the Platonic Ideas, now expressed in the language of myth.

Such is the evidence for musical connections with the Pleiads. To judge from what Porphyrius said in his *Life of Pythagoras*, it seems that they were the first heavenly body to be linked with music by the Pythagoreans. Porphyrius quotes Aristotle as his source, and it is very likely that he was telling the truth, because the early Pythagoreans could not link the standard Greek seven-stringed lyre with the ten cosmic regions of their cosmological system. The Pleiads were later superseded by another heptad (formed by the Sun, the Moon, and the five planets of Antiquity<sup>29</sup>)

<sup>27</sup> *Scholion* to Hes. *Op.* 383 (= *scholion Procli ad Hes. Op.* v. 381).

<sup>28</sup> Cf. Pl. *Rep.* 596 b (οὐκοῦν καὶ εἰώθαμεν λέγειν ὅτι ὁ δημιουργὸς ἐκατέρου τοῦ σκεύους πρὸς τὴν ιδέαν βλέπων οὕτω ποιεῖ); Pl. *Tim.* 28 a (ὅτου μὲν οὖν ἂν ὁ δημιουργὸς πρὸς τὸ κατὰ ταῦτα ἔχον βλέπων ἀεὶ, τοιοῦτῳ τινὶ προσχρώμενος παραδείγματι, τὴν ιδέαν καὶ δύναμιν αὐτοῦ ἀπεργάζηται, καλὸν ἐξ ἀνάγκης οὕτως ἀποτελεῖσθαι πᾶν).

<sup>29</sup> About the constitution of a group from the Sun, the Moon, and the five planets, cf. D. Panchenko, "Solar Light and the Symbolism of the Number Seven", *Hyperboreus* 12 (2006): 1, 21–36.



found in association with the strings of the lyre; but this could only have happened when the earlier Pythagorean cosmology was replaced by the geocentric model in which neither the central fire nor the counter-earth were accepted, and in which the Earth was motionless at the center of the cosmos. Further, since the fixed stars were obviously something other than a planet, the number of "planets," plus the Sun and the Moon, was seven. The astrological relevance of the Sun, Moon, and the five planets enhanced the importance of their heptad, and diminished the significance of the Pleiads for being associated with the heptachord lyre. The attention paid to these stars by the Pythagoreans might have been due not only to the numerical coincidence with the number of the strings on the standard lyre but also to the relevance of the Pleiads for determining the time in which important human activities should (or should not) be undertaken, as well as the beginning and end of the year and its seasons.<sup>30</sup>

But, after being replaced by the Sun, the Moon, and the five planets, the Pleiads kept their role as models of the human lyres, and were mentioned as such by some Alexandrine scholars and Latin poets, who made no mention of what seems the early Pythagorean origin of that idea. Besides, there are some scarce allusions to their connection to music (for example, when they are considered a choir, an image that is not referred to any other group of stars). Last, they reappeared in the cosmic "auditorium" at the twilight of Antiquity, as we have seen in Nonnus and in the *scholion* to Hesiod, where they were substituted for the Muses and linked to the archangels of each cosmic sphere.

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В произведениях некоторых греческих авторов в рамках учения о космической гармонии устанавливается соответствие между небесными телами и струнами лиры. В качестве связанных с космической музыкой небесных тел у разных авторов выступали земля, солнце, луна, пять известных в античности планет и сфера неподвижных звезд. Однако весьма вероятно, что первым космическим телом, связанным с лирой, были Плеяды, группа из семи звезд, известная уже Гомеру и входящая в созвездие Тельца, и что связь Плеяд с лирой установили пифагорейцы по крайней мере ко времени Аристотеля. Впоследствии Плеяды были вытеснены солнцем, луной и пятью планетами. Тем не менее о связи Плеяд с музыкой не забывали на протяжении всего существования античной литературы.

<sup>30</sup> Cf. above n. 22.